

Abstract

A catalyst system comprising a catalyst and a reductant is disclosed. The catalyst comprises a metal oxide catalyst support, a catalytic metal oxide, and a promoting metal. The catalytic metal oxide comprises gallium oxide, indium oxide or a combination of the two. The promoting metal comprises at least one of silver, cobalt, vanadium, molybdenum, tungsten, zinc, tin and bismuth. The catalyst comprises about 5 to about 31 mol% catalytic metal oxide and about 0.5 to about 9 mol% promoting metal. The reductant comprises a fluid hydrocarbon having at least 4 carbon atoms. Also disclosed is a process for reducing NO_x to N₂ using the disclosed catalyst system by mixing NO_x with a reductant and passing the mixture through a catalyst of the disclosed catalyst system.